

NUMBER OF GREEN TURTLES CAUGHT BY "BAKLAD" TRAP NET FISHING ALONG THE  
SOUTH COAST OF MOLOKAI (3,600' LONG NET GUIDE SET PERPENDICULAR TO SHORE)

Compiled by

G. H. Balazs  
May 1983

(Based on data supplied by Ed and Diane Medeiros and Bill Puleloa)

Date	No. of turtles	Date	No. of turtles
September 2, 1982	1	October 21	1
3	23	26	7
4	9	-----	-----
9	3	December 22	1
10	1	23	0
15	1	25	0
21	2	30	0
23	3	31	1
24	1	January 3, 1983	1
30	3	4	0
October 1	1	11	4
5	2	12	0
7	2	13	0
8	2	14	1
12	1	22	1
13	1	25	0
18	1	26	5
19	18	27	2
20	7	28	2
		29	1

Date	No. of turtles	Date	No. of turtles
January 30	0	April 6	0
February 8	1	7	0
9	0	12	0
11	0	13	1
25	0	21	0
26	2	22	0
March 26	0	27	1
		28	2

Between 9/2/82 and 10/26/82, 21 overnight sets were made in which turtles were captured. Sets that did not catch turtles during this period were not recorded by the fisherman.

Between 12/22/82 and 4/28/83, 32 overnight sets were made with both "turtle" and "no turtle" catches being recorded.

12/22/82 to 4/28/83 - 26 turtles or .81 turtles per set.

9/2/82 to 4/28/83 (overall, with bias) - 116 turtles or 2.2 turtles per set.

NATIONAL MARINE FISHERIES SERVICE  
 HONOLULU LABORATORY  
 P. O. BOX 3830  
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SIZE DISTRIBUTION OF 81 GREEN TURTLES TAGGED BY BILL PULELOA AND ED MEDEIROS  
 ALONG THE SOUTH COAST OF MOLOKAI, MAY 1982 - MAY 1983

Compiled by  
 G.H. Balazs-May 1983

<i>Curved carapace length in cm</i>	No. of Turtles
35 - 40	4
40 - 45	10
45 - 50	4
50 - 55	6
55 - 60	13
60 - 65	6
65 - 70	8
70 - 75	13
75 - 80	10
80 - 85	4
85 - 90	1
90 - 95	1
95 - 100	1

Approximate size categories:  
 (for curved carapace length)

Juvenile (35 - 70 cm)	63.0%
Sub-adult (70 - 85 cm)	33.3%
Adult (>85 cm)	3.7%

TRIAL CALCULATIONS OF THE TOTAL SIZE OF THE HAWAIIAN GREEN TURTLE POPULATION

by

G. H. Balazs  
May 1983

Size Categories:

Molokai (based on net captures)

juveniles - 63.0%

subadults - 33.3%

adults - 3.7%

Kau, Hawaii (based on hand captures)

juveniles - 71.4%

subadults - 22.1%

adults - 6.5%

Breeding population size estimate based on analysis by J. A. Wetherall  
(unpublished, 1983) - 750 females.

Assuming at equal sex ratio - 1,500 adults.

Using the Molokai data, total population size would be 40,540 turtles  
consisting of: 25,540 juveniles, 13,500 subadults, and 1,500 adults.

Using the Kau data, total population size would be 23,077 turtles consisting  
of: 16,477 juveniles, 5,100 subadults, and 1,500 adults.

The human population of the State of Hawaii is about 1,000,000 people.  
Using the Molokai data, there would be .041 turtle per person, or 1 turtle for  
every 25 people. Using the Kau data, there would be .023 turtle per person, or  
1 turtle for every 43 people.

There are about 728 miles of coastline in the 8 main Hawaiian Islands.  
Using the Molokai data, there would be an average of 56 turtles per mile.  
Using the Kau data, there would be an average of 32 turtles per mile.



Growth rates of immature green turtles tagged and recaptured at  
Palau, Molokai, in June 1987. (Compiled by G. H. Balazs.)

Tag No.	Date first tagged and measured	Initial carapace length, cm		Carapace length at recovery, cm		Elapsed time in months	Growth rate cm/year inches/year
		Curved	Straight	Curved	Straight		
6698, 6699*	4/25/84	--	48.0	--	52.1	37 (1 yr, 1 mo)	1.33 0.52
6397, 6398	9/3/82	57.5	--	73.5	--	57 (4 yr, 9 mo)	3.37 1.33
6421, (9876)	9/3/82	63.0	--	68.5	--	57 (4 yr, 9 mo)	1.15 0.45
6541, 6542	10/19/82	46.0	--	56.5	--	55.5 (4 yr, 7.5 mo)	2.27 0.89

\*Extensive tumors on the eyes and front flippers. Not present when originally tagged on  
4/25/84, or when resighted on 5/19/85.

Summary of green turtles tagged and resighted at Palaau, Molokai  
11-15 July 1988.

Compiled by George H. Balazs  
Southwest Fisheries Center Honolulu Laboratory  
2570 Dole Street  
Honolulu, Hawaii 96822-2396

Inconel tag No.	Colored plastic tag No.	Straight carapace length, (cm)	Curved carapace length, (cm)	Notation
<b>7/11-12/88 Site A (19 turtles with 3 tag resightings)</b>				
10756-58	gr-HF-b1	93.9	100.5	female; tumor
10759-60	gr-HG-b1	67.2	72.0	
10762-63	gr-HB-b1	75.2	80.5	
10764-65	gr-HD-b1	64.6	69.0	
10766-67	gr-HJ-b1	62.8	67.0	
10768-69	or-PM-b1	54.7	58.0	
10770-71	--	43.4	46.5	
*9884-85	--	41.3	44.0	a
10772-73	--	48.9	52.0	
10774-75	--	44.7	47.5	stomach sampled
10776-77	--	47.5	51.0	
*9589-90	--	50.1	54.5	b
10778-80	rd-AW-b1	75.7	81.0	
*7947, 49	--	60.8	65.5	c
10781-82	gr-HR-b1	67.0	71.5	
10783-84	--	45.4	48.5	
10785-86	ye-BF-b1	59.6	64.5	stomach sampled
10787-88	--	48.9	52.5	
10789-90	--	42.7	45.0	

Inconel tag No.	Colored plastic tag No.	Straight carapace length, (cm)	Curved carapace length, (cm)	Notation
<b>7/12-13/88 Site A (19 turtles with 3 tag resightings)</b>				
10791-92	gr-HP-b1	62.1	66.0	
10793, 95	--	50.6	53.5	
10796-97	gr-HK-b1	63.2	67.0	
10799-800	gr-HM-b1	61.3	66.5	
10801-02	gr-HW-b1	59.9	64.0	
10803, 05	--	54.4	58.5	
*9877-78	gr-HZ-b1	59.8	64.5	d
10806-07	gr-HY-gr	59.8	64.0	
*7945-46	--	47.9	50.5	e
10808-09	--	54.1	57.5	
10810-11	gr-HU-gr	66.3	71.5	
10812-13	or-PR-rd	62.7	69.0	
10814-15	ye-BA-or	61.6	65.5	
10816-17	--	43.5	46.3	
10818-19	or-PG-or	53.3	57.0	tumors; stomach sampled
10820-21	--	51.2	48.5	
10822-23	--	39.7	42.0	
10824-25	--	49.7	53.0	
*9874-75	--	56.2	60.0	mortality; f

Inconel tag No.	Colored plastic tag No.	Straight carapace length, (cm)	Curved carapace length, (cm)	Notation
<b>7/13-14/88 Site E (65 turtles with 8 tag resightings)</b>				
10826-28	rd-AB-or	74.7	78.5	
10829-30	rd-AG-or	68.0	72.5	
*7835-36	or-PB-or	72.2	77.0	tumors; g
10831-32	--	59.8	64.5	
10833-34	ye-BD-or	68.1	73.5	
10835-36	--	47.7	51.0	
10837-38	--	48.5	52.5	
10839-40	--	53.4	57.5	
10841-42	or-PW-rd	62.1	67.0	
*6539-40	--	54.0	57.5	h
10843-44	ye-BJ-rd	69.3	75.5	tumors
10845-46	ye-BS-rd	67.4	72.5	
*8527-28	--	56.1	59.5	i
10847-48	--	49.7	53.0	
*9486-87	ye-BL-rd	61.7	66.5	j
*8543-44	ye-BW-rd	59.6	65.5	k
10849-50	--	60.6	65.0	
10851-52	ye-BZ-rd	62.9	67.5	
10853-54	--			
10855-56	ye-BU-bl	73.7	79.0	



Inconel tag No.	Colored plastic tag No.	Straight carapace length, (cm)	Curved carapace length, (cm)	Notation
10857-58	--	52.5	56.5	
10859-60	--	49.3	53.0	
10861-62	--	56.8	59.0	healed notch
10863-64	--	51.1	54.5	6 centrals
10865-66	--	56.3	61.5	
10867-68	ye-BG-rd	72.5	78.0	
10869-70	--	51.4	54.0	
10873-74	--	61.2	65.5	
*8601, 8650	--	47.1	50.5	1
10875-76	--	56.8	60.5	
10877-78	--	56.3	60.5	
10879-80	ye-BP-rd	63.4	69.0	
10881-82	--	53.6	58.0	
10883-84	--	54.5	58.0	
10885-86	--	50.7	53.5	
10887-88	--	52.5	56.5	
10889-90	--	52.7	57.0	
10891-92	ye-BK-rd	64.2	69.5	
10893-94	--	48.7	52.0	
10895-96	--	60.1	65.0	
10897-98	--	54.0	58.0	
10899-900	--	40.9	43.5	

Inconel tag No.	Colored plastic tag No.	Straight carapace length, (cm)	Curved carapace length, (cm)	Notation
10901-02	--	40.4	43.0	
10903-04	ye-BR-b1	72.7	78.5	
10905-06	--	46.0	49.5	
10907-08	--	46.8	50.0	
10909-10	--	57.1	60.5	
10911-12	--	57.9	62.0	
*8519-20	--	56.6	62.0	m
*7825-26	--	46.9	50.0	n
10915-16	--	62.7	67.5	
10917-18	--	62.1	67.5	
10919-20	ye-BM-rd	69.4	76.0	
10921-22	--	60.2	65.0	tumors
10923-24	ye-BY-rd	72.1	78.0	tumors
10925-26	--	56.3	59.5	
10927-28	ye-BN-rd	74.7	81.0	
10929-30	--	45.4	48.0	hawkbill
10931, 33	--	54.4	58.5	
10934-36	--	65.9	71.0	
10932, 37	--	59.4	64.0	
10938-39	--	63.0	69.0	
10940-42	--	69.4	75.0	

Inconel tag No.	Colored plastic tag No.	Straight carapace length, (cm)	Curved carapace length, (cm)	Notation
<b>7/14-15/88 Site E (23 turtles with 2 tag resightings)</b>				
10943-44	--	45.1	48.5	
10945-46	--	55.1	58.0	
10947-48	--	48.7	53.0	
10949-50	wh-MW-or	65.4	69.5	
10951-52	--	57.6	62.5	
10953-54	--	46.0	49.0	
10955-56	--	41.5	43.5	
10957-59	--	57.0	61.5	
10960-61	--	50.5	53.0	
*7875, 7926	wh-MY-or	62.3	67.5	o
10962-63	--	47.1	49.5	
10964-65	--	50.2	53.5	
10966-67	--	53.0	56.0	healed notch
10968-69	--	49.0	51.5	
10970-71	--	55.5	58.5	
10972-73	--	53.7	57.5	
10974-75, 11000	wh-MP-or	80.1	86.5	
10976-77	wh-MD-or	65.5	70.0	
*8531-32	wh-MM-or	69.0	74.0	p
--	wh-MK-or	57.2	61.0	
10978-79	wh-MB-or	63.1	67.5	

Inconel tag No.	Colored plastic tag No.	Straight carapace length, (cm)	Curved carapace length, (cm)	Notation
10980-81	wh-MR-or	65.4	70.5	
10982-83	wh-MG-or	65.0	70.5	
<b>7/11/88 (5 captive-reared Sea Life Park green turtles released at Palaau)</b>				
D156, D157 (10751)	--	26.8	--	
D171 (10752)	--	21.8	--	
D166, D167 (10753)	--	24.1	--	pc's partly missing
D164, D165 (10754)	--	25.9	--	
D158, D159 (10755)	--	21.7	--	

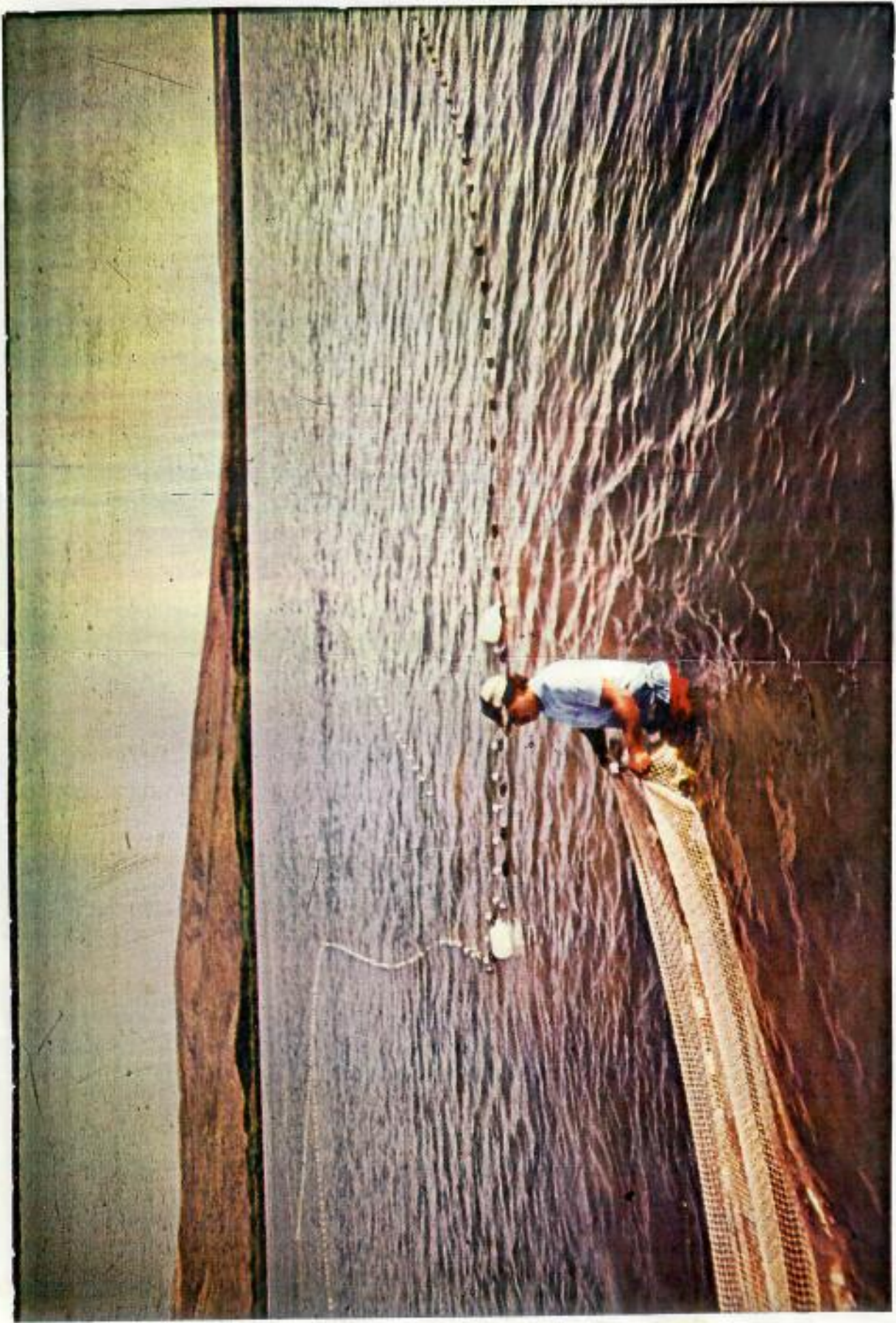
\*Growth rates for tag resightings at Palaau.

	<u>Tag No.</u>	<u>Initial straight carapace length, (cm)</u>	<u>Recapture interval, (yr/mo)</u>	<u>Growth rate, (cm/yr)</u>
a	9884-85	40.6	1-1	0.65 (1/4 in)
b	9589-90	47.0	1-10	1.69 (5/8 in)
c	7947, 49	51.9	3-3	2.74 (1-1/16 in)
d	9877-78	57.4	1-1	2.22 (7/8 in)
e	7945-46	38.8	3-3	2.80 (1-1/16 in)
f	9874-75	54.0	1-1	2.03 (3/4 in)
g	7835-36	68.6	3-0	1.20 (1/2 in)



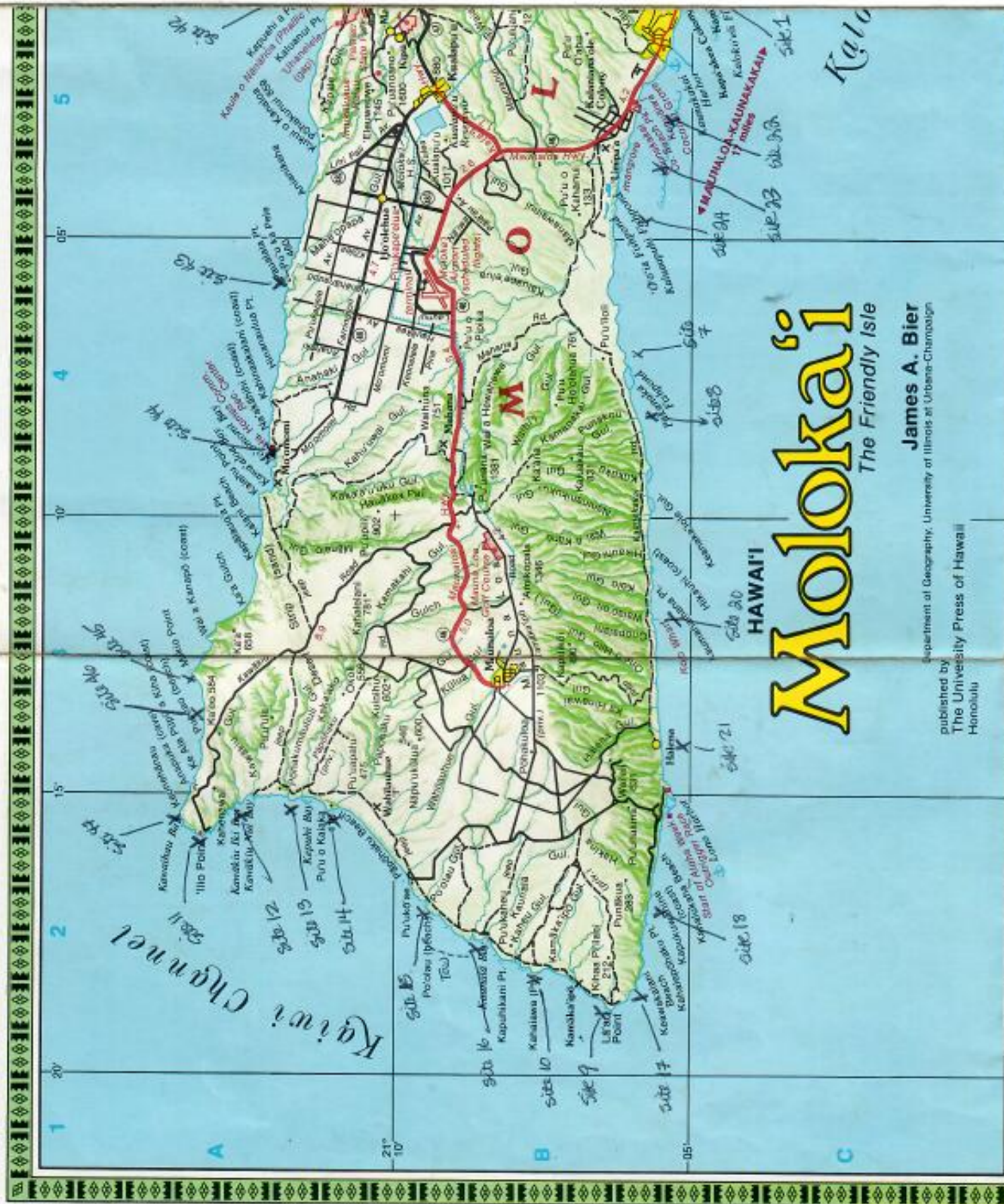
	<u>Tag No.</u>	<u>Initial straight carapace length, (cm)</u>	<u>Recapture interval, (yr/mo)</u>	<u>Growth rate, (cm/yr)</u>
h	6539-40	40.5 (curved meas.)	5-9	2.96 (1-1/8 in)
i	8527-28	48.8	3-0	2.43 (1 in)
j	9486-87	57.0	2-9	1.71 (5/8 in)
k	8543-44	51.8	3-0	2.59 (1 in)
l	8601, 8650	40.6	3-3	2.00 (3/4 in)
m	8519-20	49.0	3-0	2.53 (1 in)
n	7825-26	39.6	3-0	2.43 (1 in)
o	7875, 7926	56.5	3-3	1.78 (3/4 in)
p	8531-32	58.7	3-0	3.43 (1-3/8 in)
	Mean -	50.7	31 months	2.15 (7/8 in)
	Range -	38.8-68.6	13-39 mo	0.65-3.43

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Approximate Site Locations



# Molokai

HAWAII  
The Friendly Isle

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